

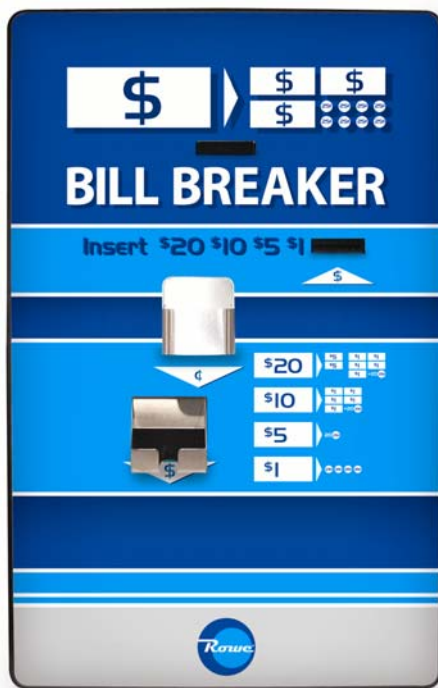


Bill Breaker

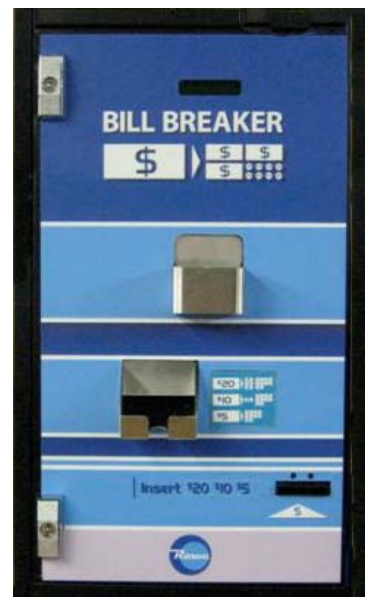
Field Service Manual
and

Parts Catalog

For all models



500RLC1-2
Rear Load



500C2-2
Front Load

22190006
May, 2008

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Table of Contents

Warranty	6
Specifications for Mounting (Dimensions, Weights, Electrical)...	7
Power Cord, Toggle Switch, ON/OFF, and fuse Locations	8
Changer Installation to meet ADA Requirements	9
Installing a Rear Load	10,12
Installation of a Front Load Bill Breaker on a base	11
Set Up/General Operation (<u>one</u> denomination (-1) models <u>without</u> coin hoppers)	13
Set Up/General Operation (<u>one</u> denomination (-1) models <u>with</u> coin hoppers) ..	15
Set Up/General Operation (<u>two</u> denomination (-2) models <u>without</u> coin hoppers)	16
Set Up/General Operation (<u>two</u> denomination (-2) models <u>with</u> coin hoppers) ..	19
"Cassettes \$1, \$5"	21
Reconciliation	22
Program Reset	23
Currency Cassette Configuration.....	24
"Out of Currency" Currency Load / Reconciliation	25
"Out of Coin" Coin Load / Reconciliation	26
Printer Set Up ..	27
Configuration Print	28
Help Code Chart.....	29
Help Code Processing.....	31
Stacker Full	
Out Of Currency	
Bill Acceptor Error	
No Stacker Attached	
Bill Jam	
Status Report ..	32
External Status Report Key and Switch.....	32
Voltage Test Points.....	33
One Denomination, Model F50, Bill Dispenser Maintenance Schedule	34
Two Denomination, Model F53, Bill Dispenser Maintenance Schedule	34
Mars Bill Acceptor.....	35
New Bill Design Updates	
DIP Switch Settings	
Cleaning	
For More Information	

Coin Hoppers.....	36
United States dimes (10¢) and dime sized tokens	
Optional Hopper Extensions	
Cleaning	
For More Information	
Parts: 500C2-2	Front Load, 2 denomination dispenser..... 38
500RL-2	Rear Load, 2 denomination dispenser 40
500RLC2-2	Rear Load, 2 coin hopper, 2 denomination dispenser..... 42
500RLC2-1	Rear Load, 2 coin hopper, 1 denomination dispenser..... 44
500C2-1	Front Load, 2 coin hopper, 1 denomination dispenser..... 46
Printer	48
Cassette	49

Fujitsu F53 Cash Dispenser Operator's Guide Included (Rowe part number 22214101)
Fujitsu F50 Cash Dispenser Operator's Guide Included (Fujitsu part number P2KD11078-B002/6)
Fujitsu F53 Currency Loading Procedure (Fujitsu part number P1KD02881-B001)
Fujitsu F50 Currency Loading Procedure (Fujitsu part number part number P1KD11078-B002/6)
NOTE: All Fujitsu manuals above are separate from this manual.

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Warranty

Rowe extends the original operator of this equipment the following warranty:

All parts are guaranteed to be free of defects in material and workmanship for the specific periods that follow. Rowe agrees to repair, without charge during such period, any part that proves defective upon examination by Rowe. All costs of shipping an allegedly defective part to Rowe's offices shall be borne by the original operator. Rowe will pay the shipping costs for the replacement of defective parts.

Electrical Circuit Boards	1 year from date of purchase
Electrical and Mechanical Parts	1 year from date of purchase
Lamps	90 days from date of purchase

In the case of parts supplied to Rowe as components, Rowe extends the same warranty period as extended by the original manufacturer.

The above warranty applies provided that all parts of the product have been serviced properly as directed in the service manual, and provided the alleged defective part, upon examination by Rowe, shall prove to be thus defective. Under no circumstances shall Rowe be liable for any incidental, consequential, or special damages, losses or expenses arising from or in connection with the use of, or the inability to use, the product for any purpose. Rowe reserves the right to make any changes or improvements in products theretofore manufactured or sold.

This warranty will not apply to any part that has been subjected to accident, abuse, or misuse.

ROWE INTERNATIONAL EXTENDS NO WARRANTY, EXPRESSED OR IMPLIED, TO PURCHASERS OR USERS OF ITS PRODUCTS EXCEPT AS HEREIN SET FORTH, WHETHER BY OPERATION OF LAW OR OTHERWISE.

Specifications for Mounting

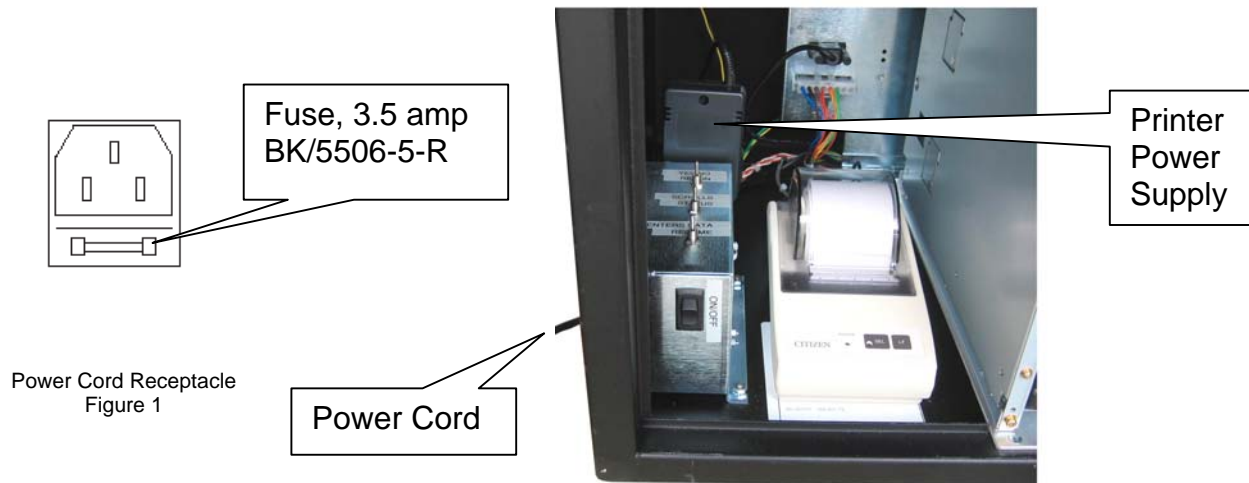
Model:	500-1 500C1-1, 500C2-1	500RL-1	500RLC1-1 500RLC2-1
Type:	Front Load	Rear Load	Rear Load
Number of Bill Denominations Dispensed:	1	1	1
Cabinet Dimensions - Width: - Depth: - Height:	19 in. 17.25 in. 32 in.	18 in. 17.25 in. 16.5 in.	18 in. 17.25 in. 32 in.
Face Plate (DxWxH):	n/a	.125" x 23.75" x 21.75"	.125" x 23.75" x 37.25"
Approx. Shipping Weight:	500-1: 95 lbs. 500C1-1: 100 lbs. 500C2-1: 105 lbs.	87 lbs.	500C1-1: 120 lbs. 500C2-1: 125 lbs.
Power* - Line Voltage:	115 VAC, 95-125 VAC	115 VAC, 95-125 VAC	115 VAC, 95-125 VAC
- Idle:	110/115 AC; 60Hz, 130w/1.5A	110/115 AC; 60Hz, 130w/1.5A	110/115 AC; 60Hz, 130w/1.5A
- Active:	110/115 VAC; 60Hz, 230w / 3.5A	110/115 VAC; 60Hz, 230w / 3.5A	110/115 VAC; 60Hz, 230w / 3.5A

Model:	500-2 500C1-2, 500C2-2	500RL-2	500RLC2-2 500RLC1-2
Type:	Front Load	Rear Load	Rear Load
Number of Bill Denominations Dispensed:	2	2	2
Cabinet Dimensions - Width: - Depth: - Height:	19 in. 17.25 in. 32 in.	18 in. 17.25 in. 16.5 in.	18 in. 17.25 in. 32 in.
Face Plate (DxWxH):	n/a	.125" x 23.75" x 21.75"	.125" x 23.75" x 37.25"
Approx. Shipping Weight:	500-2: 115 lbs. 500C1-2: 120 lbs. 500C2-2: 125 lbs.	92 lbs.	500RLC1-2: 125 lbs. 500RLC2-2: 130 lbs.
Power* - Line Voltage:	115 VAC, 95-125 VAC	115 VAC, 95-125 VAC	115 VAC, 95-125 VAC
- Idle:	110/115 AC; 60Hz, 130w/1.5A	110/115 AC; 60Hz, 130w/1.5A	110/115 AC; 60Hz, 130w/1.5A
- Active:	110/115 VAC; 60Hz, 230w / 3.5A	110/115 VAC; 60Hz, 230w / 3.5A	110/115 VAC; 60Hz, 230w / 3.5A

*No more than three (3) Bill Breaker units may be connected to a single 15 amp circuit.

Rowe International reserves the right to make improvements and changes at any time.

Power Cord, Toggle Switch, ON/OFF Location, and Fuses



Rear Load Models

The Power Cord receptacle is located on the cabinet bottom panel below the AC power and switch box (shown above in Figure 1).

Front Load Models

The power cord receptacle is located on the cabinet bottom panel in the rear, left corner.

Fuse Locations

There are two fuses used in the Bill Breaker.

- 1) Fuse, 3.5 amp BK/5506-5-R: Located in the power cord receptacle at the bottom and rear of the toggle switch box (shown above in Figure 1).
- 2) Fuse F3.15AH, 250v slow blow: Located on the power supply assembly (see figure below).

IMPORTANT NOTE

Plugging any device (such as drill, vacuum, etc.) into the printer power receptacle may cause a blown fuse.

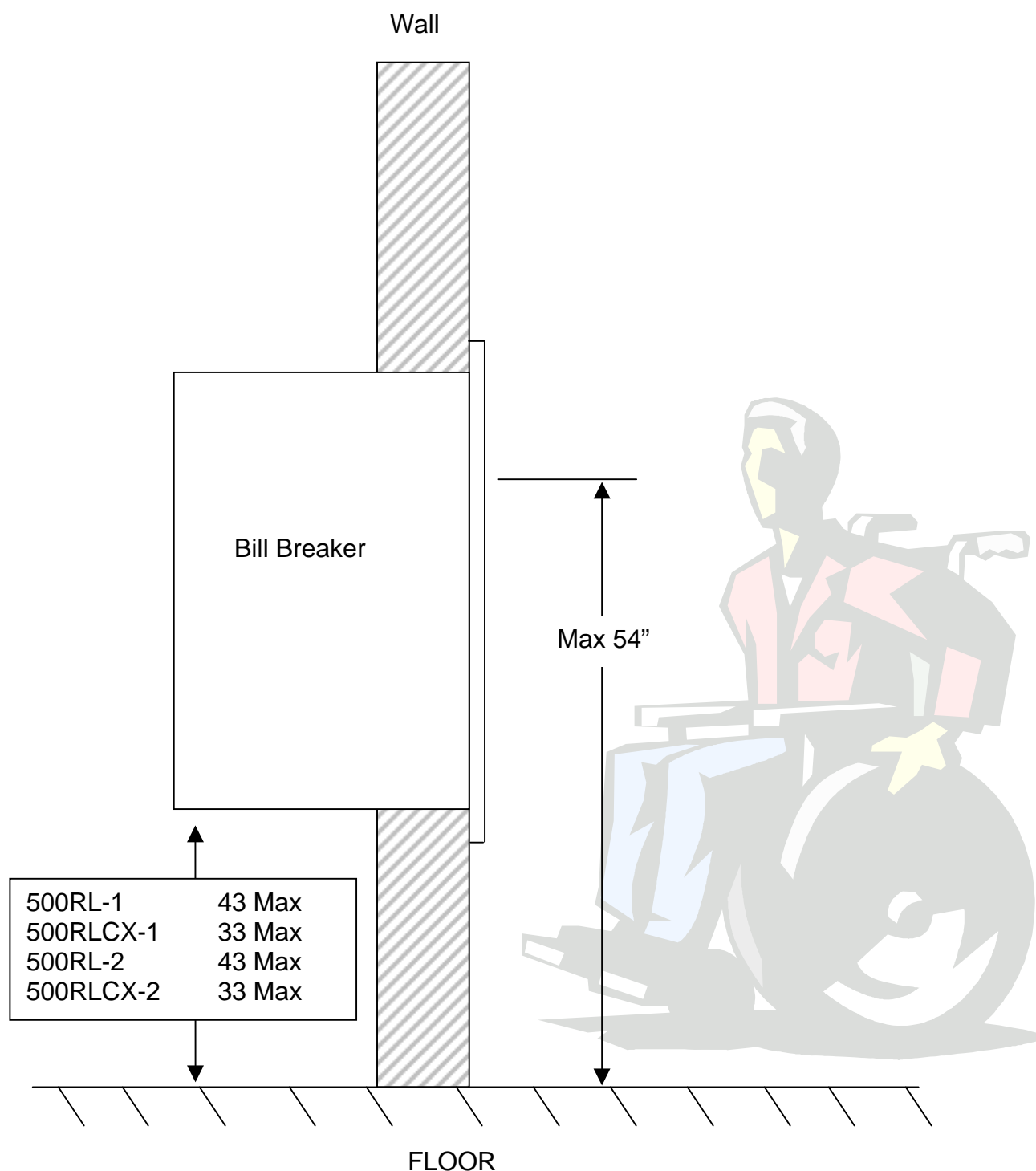
Fuse F3.15AH, 250 V
Slow Blow



Power Supply Assembly

Changer Installation to Meet ADA Requirements

The American Disabilities Act requires unobstructed access to equipment. It is to be no lower than 15 inches and no higher than 54 inches from the ground. This requirement must be met whether a changer is installed on a base, on a table, or in the wall.



Installing a Rear Load

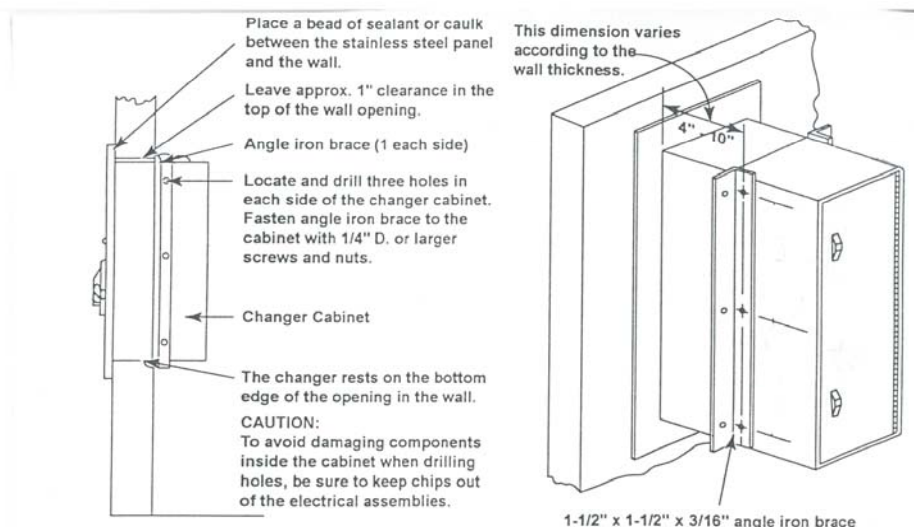
General

For all methods of installation, locate a convenient power source and be sure that the bill changer is mounted level.

The Rear Load Bill Breaker is primarily designed to be flush mounted on a wall with the cabinet itself protruding through a hole (or cutout) in the wall. The cutout should be determined by the cabinet dimensions shown on page 7. The faceplate, attached to the cabinet, is mounted tight (or flush) against the outside surface of the wall and secured with two angle braces (one on each side of the bill changer). See below for an illustration of this mounting technique. The wall should be flat and vertical so that when the changer is mounted to the wall, no gap exists between the wall and the stainless steel panel. If the changer is mounted on an outside wall, apply a liberal bead of sealant or caulking to the backside of the panel near the four outside edges to ensure a good weather seal and discourage prying.

Typical Wall Mounting

1. Refer to page 6 for cabinet dimensions and then make an opening in the wall just large enough for the changer cabinet. (Determine the bill changer mounting height before you start cutting into the wall.)
2. Depending on the wall thickness, locate and drill three ¼-inch diameter (or larger) holes in each side of the cabinet as shown below. Drill the holes in the angle-iron to match the holes in the cabinet.
3. Set the bill changer in the opening in the wall and apply a bead of sealant or caulking to the back side of the faceplate. Position the faceplate tight against the wall and fasten the angle braces to the sides of the bill changer with ¼-inch diameter screws or screws that match the holes drilled in Step#2. Make sure that the faceplate is tight against the wall.

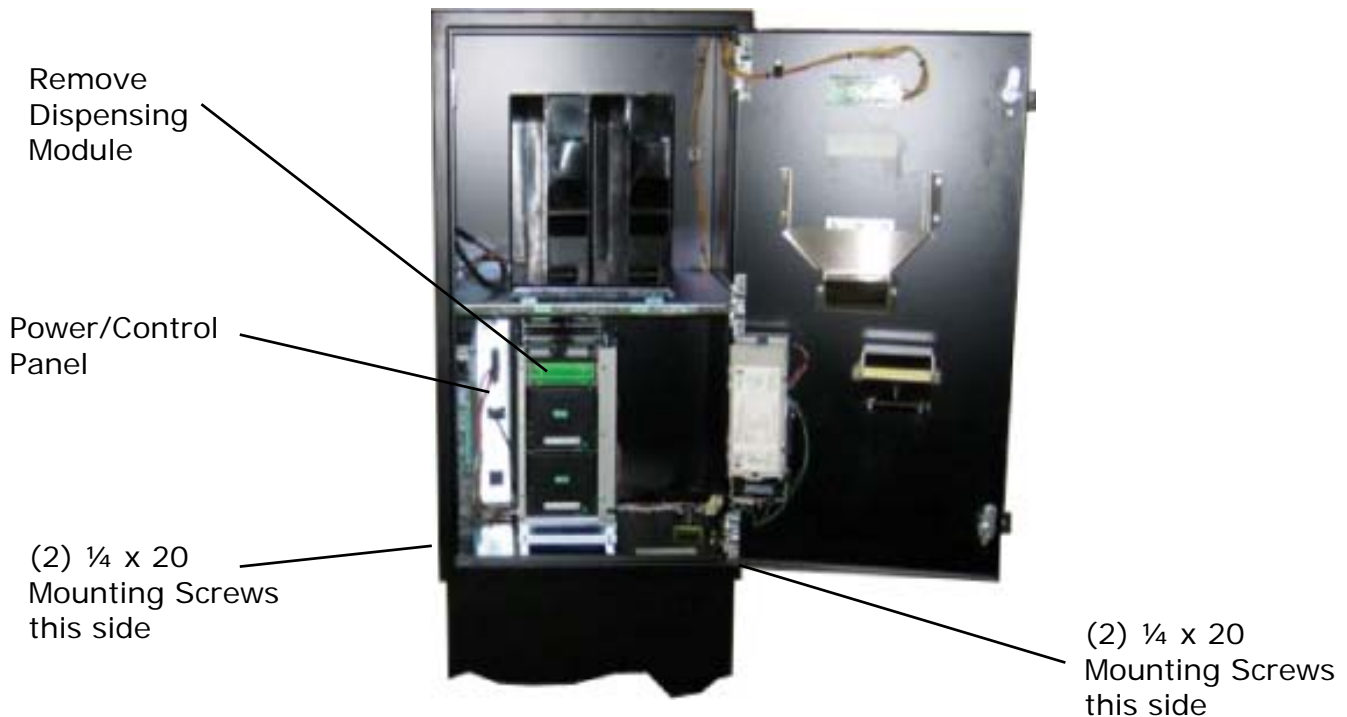


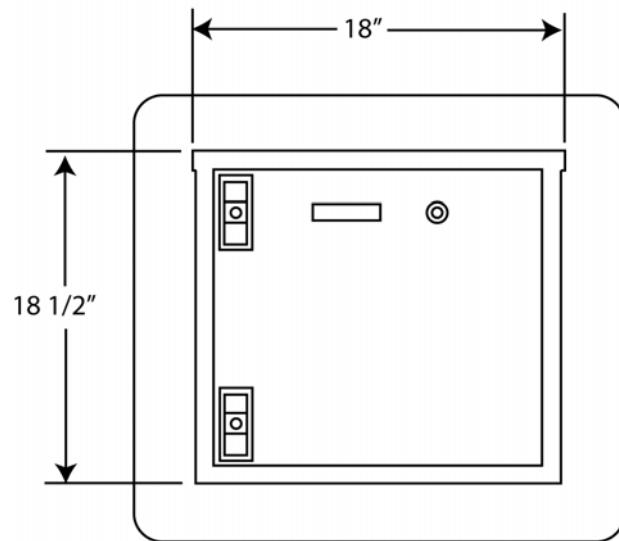
Installing a Front Load Bill Breaker on a Base (Models 500-1, 500CX-1, 500-2, 500CX-2)

Important Note:

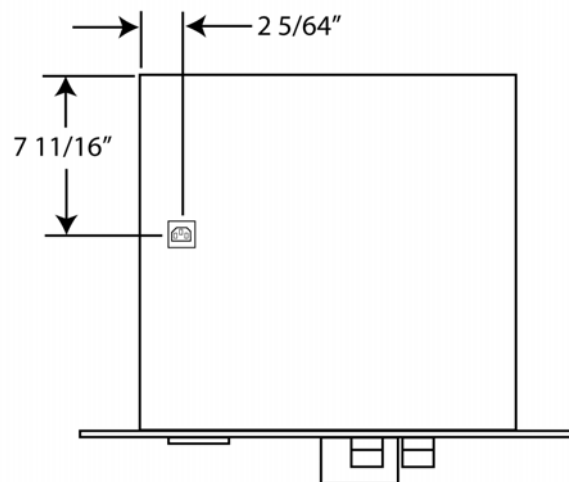
Do not position the rear side of the base flush with a wall. The rear side of the cabinet must hang over the rear side of the base by 2.5 inches to allow for the power cord to mount to the underside rear corner of the cabinet.

1. Open cabinet door.
2. Remove the dispensing module from the cabinet.
3. Temporarily bolt the cabinet on the base using 2 of the mounting screws.
Four ¼ x 20 mounting screws are stored in the four holes in top of the base.
4. Place the base and cabinet in position (cabinet can be placed tight against a wall).
5. Mark the position of the base on the floor.
6. Separate the base and cabinet.
7. Using lag bolts in the four .375" openings, mount base to the floor.
8. Partially insert the ¼ x 20 screw into the left rear hole so that the cabinet can be positioned over the key hole screw opening.
9. Slide the cabinet into place and insert the remaining 3 mounting screws.
10. The left rear screws can be tightened by reaching around the silver power/control panel.
11. Insert the power cord into the AC outlet found on the bottom left rear cabinet corner.
12. For extra security, additional screws can be inserted through the rear cabinet panel into the wall.





REAR VIEW



BOTTOM VIEW

Set Up/General Operation of One Denomination (-1) Models without coin hoppers (For Models 500-1, 500RL-1)

When you first receive your new Bill Breaker, it will need to be configured for your use. Some options may be factory set but they are generic and will need to be reset.

There are three toggle switches on the bottom of the main board, located in the top left side of the cabinet rear panel for front load models. For rear load models, the three toggle switches are found on the AC power and switch box (see page 8).

These are labeled:

Resume:	Brings you to the next part of the program. Pressing the resume switch confirms and enters the data
Status:	Moves the cursor on the display during the set up procedure. Pressing the status switch moves the cursor through the data fields from left to right
Recon:	Toggles between all yes/no questions, as well as all numeric questions. Pressing the recon switch changes the data in the data field

Also located in this area are the connections for the internal printer, if used, a power outlet, and the printer port connection. The main power switch is also located in this area. The main board can be accessed by removing the screw that holds the control panel down.

This is a good time to check any connections that may have come loose during shipping, check that the cash dispenser is secure, and remove all packing materials which maybe around the cash dispenser. Check that the Mars bill validator, harnesses, and bill box are secure.

The Bill Breaker can be mounted to a base style cabinet or installed into a wall if you have a Rear Load model. Securely bolt down the Bill Breaker whether on a base or in a wall. The power required is 110 volts with a 15-amp surge.

(continued)

Set Up/General Operation of One Denomination (-1)

Models without coin hoppers

(For Models 500-1, 500RL-1)

1. Load currency magazine with at least 50 bills (see separate Fujitsu manual)
2. Turn on the main power switch to the Bill Breaker.
3. The display will read "Cassette 1 = \$1" N
4. Cycle the Recon switch to respond to Y if \$1 bills are to be dispensed. Go to \$5.
5. Press Resume switch until the desired denomination is found.
6. Press the resume switch. The display reads "enter machine #". Enter the appropriate machine number by using the recon switch, which changes the value of the data, and the status switch, which will move the cursor from left to right. After entering the machine number, press the resume switch to register the entered data.
7. The display will read, "Printer installed". If there is a printer, Enter "Y" toggling the Recon switch.
8. The display will read, "Enter bill load". Enter the pre-determined bill load into the response area and press resume to enter the data. The display will read "\$XXXXX load OK? Y/N"
9. Press resume if the load amount is correct.

The following area will assist you in setting up your Bill Breaker to handle the denominations of your choice. The display will cycle through all denominations beginning with \$1 and ending with \$100. (\$50's & \$100's can only be enabled with a Mars 2811 Bill Validator) We ship a Mars Bill Validator that accepts up to a \$20 bill, to accept \$50's and \$100's an optional Mars 2811 is required. The display will read, "Enable \$5 entry?" Respond "Y" and press the resume switch. Continue this way for each denomination you would like accepted. Enter number and press the Recon switch.

After all denominations have been configured, press the resume switch, and the display will read "configuration OK?" Respond "Y" and press the resume switch. Display will read, "printing report". Display will then read "printed report OK?" Respond "Y" even if you don't have a printer and press the resume switch. Display will now read "ready to accept bill".

Set Up/General Operation of One Denomination (-1) Models with coin hoppers

(For Models 500C1-1, 500C2-1, 500RLC1-1, 500RLC2-1)

Switches

Results

Resume

Brings you to the next part of the program.

Status

Moves the cursor on the Display during the setup procedures.

Recon

Toggles between all yes and no questions and is used for all numeric questions.

Display	Function (Press Resume switch after completing each function).
Cassette 1 = \$1 Y/N	Load magazine with at least 50 bills (see separate Fujitsu manual). Shows magazine denomination. Press Recon to change N to Y if \$1 bills are being dispensed. Press Resume to continue.
Enter Mach #	Establishes machine identification; press Resume switch
Printer Installed	Answer yes or no using Recon switch. Then press Resume switch.
Enter bill load in \$	Enter total dollar value inside magazines using Status & Recon switches.
xxxxx Load OK Y/N?	Verifies total dollar value inside magazines
Coin Dispenser #1 Y/N?	Checks to see if coin dispenser #1 is installed
a) If yes, Resume Ent Load In # Pieces	The total # of coins using Status & Recon switches.
b) # of pieces OK? _ _ _	Verifies the # of coins
c) Enter piece value x.xx	x.25 – quarters using Status & Recon switches.
Coin Dispenser #2 Y/N?	Checks to see if coin dispenser #2 is installed
Enable \$1 through \$100	Allows you to choose which bills you want accepted (Example enable \$100 <Y>)
# From \$1 Cassette	Number of notes to be dispensed using Status & Recon switches.
# From Coin #1	Number of coins to be dispensed from Coin Hopper #1 using Status & Recon switches.
# From Coin #2	Number of coins to be dispensed from Coin Hopper #2 using Status & Recon switches.
Configuration OK Y/N	If you have a printer, prints out machines configuration. "No" brings you back to the beginning
Printed report OK? Y/N	Press Recon switch for "Y" yes.
"Ready to Accept Bill Y?"	Bill Breaker is now ready.

Set Up/General Operation of Two Denomination (-2) Models without coin hoppers

(For Models 500-2, 500RL-2)

When you first receive your new Bill Breaker, it will need to be configured for your use. Some options may be factory set but they are generic and will need to be reset.

There are three toggle switches on the bottom of the main board, located in the top left side of the cabinet (rear).

These are labeled:

Resume:	Brings you to the next part of the program. Pressing the resume switch confirms and enters the data
Status:	Moves the cursor on the display during the set up procedure. Pressing the status switch moves the cursor through the data fields from left to right
Recon:	Toggles between all yes/no questions, as well as all numeric questions. Pressing the recon switch changes the data in the data field

Also located in this area are the connections for the internal printer, if used, a power outlet, and the printer port connection. The main power switch is also located in this area. The main board can be accessed by removing the screw that holds the control panel down.

This is a good time to check any connections that may have come loose during shipping, check that the cash dispenser is secure, and remove all packing materials which maybe around the cash dispenser. Check that the Mars bill validator, harnesses, and bill box are secure.

The Bill Breaker can be mounted to a base style cabinet or installed into a wall if you have a Rear Load model. Securely bolt down the Bill Breaker whether on a base or in a wall. The power required is 110 volts with a 15-amp surge.

(continued)

Set Up/General Operation of Two Denomination (-2) Models without coin hoppers

(For Models 500-2, 500RL-2)

NOTE: Resume, Status, and Recon switches are located in the AC Power & switch box inside the cabinet.

Switches	Results
Resume	Brings you to the next part of the program.
Status	Moves the cursor on the display during the setup procedure.
Recon	Toggles between all yes and no questions and is used for all numeric questions.

Display	Function (Press Resume switch after completing each function).
Cassettes \$1, \$5	Shows cassette denomination. Load each cassette with at least 50 bills (see separate Fujitsu manual) and press Resume.
Enter Machine #	Establishes machine ID; choose number using Recon switch; press Resume.
Enter Bill Load in \$	Enter total dollar value inside cassettes using Status & Recon switches
\$ XXXX Load OK Y/N	Verifies total dollar value inside cassettes. Use Recon switch to answer Y/N. Press Resume.
Max Trans Rate Y/N?	Enter Y/N using Recon switch. Press Resume.
	If N ... begin instructions on next page at "Enable \$5 entry"
Number of Minutes =	Enter number of minutes for which bills will be entered before automatic shutdown using Recon. Press Resume.
Number of Bills =	Enter number of bills inserted before shutdown occurs using Recon. Press Resume.

(continued)
Set Up/General Operation of Two Denomination (-2)
Models without coin hoppers
(For Models 500-2, 500RL-2)

# Minutes Shutdown =	Enter number of minutes unit will be shutdown before automatically returning back to service using Recon. NOTE: Time must be greater than 1 minutes with 99 being shutdown requiring manual restart. Press Resume.
Enable \$5 Entry ?	Toggle with Recon for Y/N, press Resume. Continue for \$10, \$20, \$50, \$100 denominations.
Configuration OK Y/N	If correct, press Resume. With a printer, the machine configuration prints out. "No" returns to the beginning.

Set Up/General Operation of Two Denomination (-2) Models with coin hoppers

(For Models 500C1-2, 500C2-2, 500RLC1-2, 500RLC2-2)

Switches

Results

Resume

Brings you to the next part of the program.

Status

Moves the cursor on the Display during the setup procedures.

Recon

Toggles between all yes and no questions and is used for all numeric questions.

Display	Function (Press Resume switch after completing each function).
Cassette \$1, \$5	Shows cassette denomination. Load each cassette with at least 50 bills (see separate Fujitsu manual) and press Resume.
Enter Mach #	Establishes machine ID; choose number using Recon switch; press Resume.
Printer Installed	Answer yes or no using Recon switch. Then press Resume switch.
Enter bill load in \$	Enter total dollar value inside cassettes using Status & Recon.
\$ XXXX Load OK Y/N?	Verifies total dollar value inside cassettes
Coin Dispenser #1 Y/N?	Checks to see if coin dispenser #1 is installed
a) If yes, Resume Ent Load In # Pieces	The total # of coins using Status & Recon.
b) # of pieces OK? _ _ _	Verifies the # of coins
c) Enter piece value x.xx	x.25 – quarters using Status & Recon.
Coin Dispenser #2 Y/N?	Checks to see if coin dispenser #2 is installed
Enable \$1 through \$100	Allows you to choose which bills you want accepted (Example enable \$100 <Y>)
# From \$1 Cassette	Number of notes to be dispensed from \$1 Cassette using Status & Recon switches.
# From \$5 Cassette	Number of notes to be dispensed from \$5 Cassette using Status & Recon switches.
# From Coin #1	Number of coins to be dispensed from Coin Hopper #1 using Status & Recon switches.
# From Coin #2	Number of coins to be dispensed from Coin Hopper #2 using Status & Recon switches.

Max Trans Rate Y/N?	Enter Y/N using Recon switch. Press Resume.
	If N ... begin instructions below at "Enable \$5 entry"
Number of Minutes =	Enter number of minutes for which bills will be entered before automatic shutdown using Recon. Press Resume.
Number of Bills =	Enter number of bills inserted before shutdown occurs using Recon. Press Resume.
# Minutes Shutdown =	Enter number of minutes unit will be shutdown before automatically returning back to service using Recon. NOTE: Time must be greater than 1 minutes with 99 being shutdown requiring manual restart. Press Resume.
Enable \$5 Entry ?	Toggle with Recon for Y/N, press Resume. Continue for \$10, \$20, \$50, \$100 denominations.
Configuration OK Y/N	If correct, press Resume. With a printer, the machine configuration prints out. "No" returns to the beginning.

Cassettes \$1, \$5 for Two Denomination Models

"Cassettes \$1, \$5" showing on display indicates normal two denomination Bill Breaker start up identifying that the cassettes are set up to handle \$1 and \$5 notes. "Cassettes \$5, \$10" showing on display indicates that the cassettes are set up to handle \$5 and \$10 notes and so on. Change the cassette configuration on page 24 in "Currency Cassette Configuration"

"Cassette 1 = \$1 N" showing on display indicates normal one denomination Bill Breaker start up. See pages 13-15 for set up of one denomination models.

Reconciliation

Press the Recon switch. Each cycle of the switch will display a different line item. To end the cycle, press the Resume switch moving on to the next line item.

The display will prompt, "Print recon Y/N?"

Select "Y" and press the resume switch. The reconciliation report prints and the display reads "printed report OK?"

Respond "Y" and press the resume switch. The display will read "? CLR recon data Y/N?"

Respond to the CLR Recon Data message above by selecting "Y" and press the resume switch. Bill Breaker will read "Ready To Accept Bills".

IMPORTANT NOTE:

The Bill Breaker ***MUST BE RECONCILED BEFORE ANY EXSISTING OPTIONS ARE CHANGED.*** This does not apply to initial setup, ONLY if you wish to change any pre-existing options or settings.

Failure to do so will delete all bookkeeping functions and events for the current period.

Sample Reconciliation Report

RECONCILIATION RPT	
F53C_2_5	
MACHINE #	- - - 1
RECON AUDIT	- - 0
MAINTENANCE	- - 17
DOC STACKED	- - 5
STACK DOLLAR	\$46
REJECTED	- - - - \$0
CAS#1 DOLLAR	- \$15
CAS#2 DOLLAR	- \$10
BILL LOAD	- - - - \$3000
BILLS PAID	- - - - \$25
BILLS LEFT	- - - - \$2975
#1 COIN LOAD	- \$250.00
#1 COIN PAID	- \$21.00
#1 COIN LEFT	- \$229.00
- - - MACHINE TOTALS - - -	
TTL LOAD	\$3250.00
TTL PAID	\$46.00
TTL LEFT	\$3204.00

Program Reset

Before starting the reset process, a reconciliation "Recon" must be completed.

Turn power OFF.

Hold down Resume switch.

While holding down Resume switch, turn power ON and hold Resume down for several seconds. The following prompts will be displayed:

- "Hold Resume To CONFIG"
- "Release Resume"
- "Reset Machine Y/N"
- Answer "Y" by cycling Recon switch
- "Cassettes \$1 \$5" (depending on how the cassettes are set up)

Follow display prompts.

Currency Cassette Configuration

The following information will allow you to set up or modify the denominations of currency that your Bill Breaker will dispense.

Note: It is important to complete "Reconciliation" and "Reset" before changing cassette configuration.

The currency cassettes have magnets built into them. The currency dispenser "reads" these magnet configurations, and relays this data to the Bill Breaker's main board. **It cannot be stressed enough that extreme care must be taken while changing these configurations. The Bill Breaker will only read these magnet settings for denomination recognition. It does not matter if the correct denomination is placed into the cassettes, because if the magnets are *set wrong*, the dispenser will *dispense incorrectly*.**

To access the magnets open the cassette. There is a metal clip which is part of the top cover. Remove bracket to access magnets. There are 4 magnet positions in each cassette. They are marked A,B,C, and D on the top lid. **IMPORTANT NOTE: The position of the white side and white top face is critical. The magnet's white side faces the outside cassette edge. The white top faces the top cassette edge. If magnets are in the incorrect position, the error code is "?Wrong Cassette?".** One end and one side of the magnets is painted, while the other end and side is not. When inserting a magnet, the paint goes towards the top and the front of the cassette. The top of the cassette is where the letters ABCD appear. The front of the cassette is where the button is located to open the top lid. **For more information and a picture of the magnet assembly, please see chapter 2 of the Fujitsu dispensers operators guide.**

<u>TYPE</u>	<u>DENOMINATION</u>	<u>POSITIONS</u>
1	\$1.00	D
2	\$5.00	C
3	\$10.00	D & C
4	\$20.00	B

Note : Loading Currency into the cassettes must be done properly to assure the reliability of the Bill Breaker. Take your time while loading currency and never try to insert more than 30 bills at a time until you reach the desired amount. PLEASE refer to the section in the enclosed "Fujitsu Cash Dispensers Operators Guide" pertaining to loading currency.

"Out of Currency" Currency Load / Reconciliation

The Bill Breaker will shut down and will not accept further currency **if**:

- EITHER cassette is drawn down to approximately 15-35 notes
- EITHER coin hopper is drawn down to about 100 coins
- the Bill Validator stacker is full

You must perform a reconciliation and reload the cassettes with the same amount of money that you originally started with. This preserves the "Bill Load" data in the Bill Breaker.

Press the resume switch. The display will prompt, "Print recon Y/N?"

Select "Y" and press the resume switch. The reconciliation report prints and the display reads "printed report OK?"

Respond "Y" and press the resume switch. The display will read "? CLR recon data Y/N?"

Remove the Mars stacker, both "empty" cassettes, and inspect the reject bin, removing all rejected bills. Any bills found here must be returned with the cassettes and stacker and counted with them. It is still classified as bills from the cassettes. Return the empty reject bin into its slot.

Install an empty stacker on the validator and two full cassettes in the dispenser. Respond to the CLR Recon Data message above by selecting "Y" and press the resume switch. Bill breaker will read "Ready To Accept Bills".

IMPORTANT NOTE:

The Bill Breaker ***MUST BE RECONCILED BEFORE ANY EXSISTING OPTIONS ARE CHANGED.*** This does not apply to initial setup, ONLY if you wish to change any pre-existing options or settings.

Failure to do so will delete all bookkeeping functions and events for the current period.

"Out of Coin" Coin Load / Reconciliation

The Bill Breaker will shut down and will not accept further currency **if: EITHER** coin hopper is drawn down to about 100 coins.

You must perform a reconciliation and reload the hopper with the same amount of money that you originally started with. This preserves the "Coin Load" data in the Bill Breaker.

Press the resume switch. The display will prompt, "Print recon Y/N?"

Select "Y" and press the resume switch. The reconciliation report prints and the display reads "printed report OK?"

Respond "Y" and press the resume switch. The display will read "? CLR recon data Y/N?"

Prompts to purge coin hopper are as follows:

- "Purge Coin Y/N"
- "Purge Coin?"

These messages repeat if a second hopper is used.

Respond to the CLR Recon Data message above by selecting "Y" and press the resume switch. Bill breaker will read "Ready To Accept Bills".

IMPORTANT NOTE:

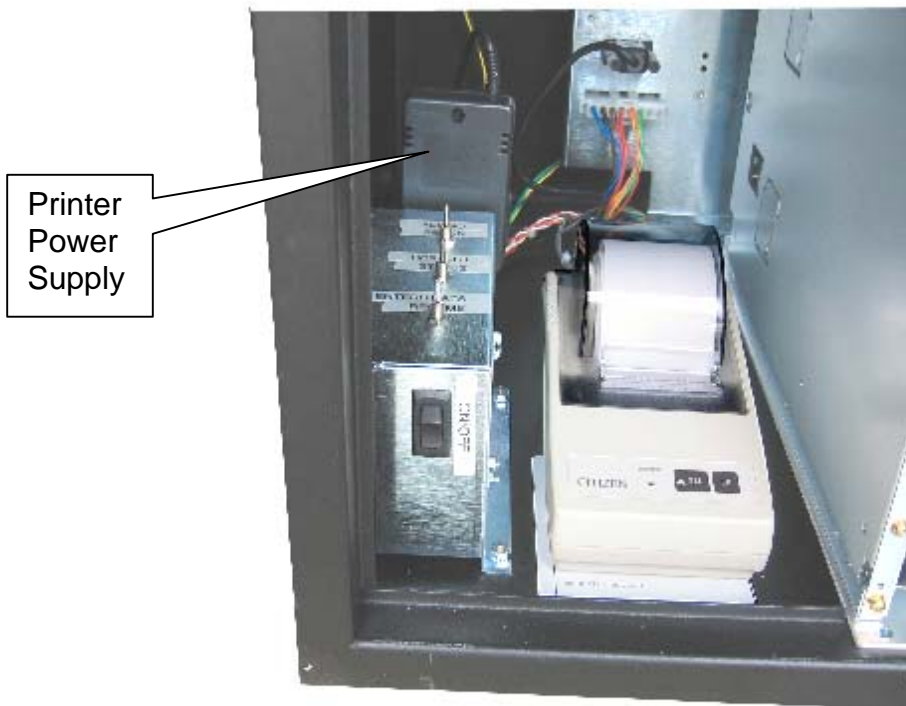
The Bill Breaker ***MUST BE RECONCILED BEFORE ANY EXSISTING OPTIONS ARE CHANGED.*** This does not apply to initial setup, ONLY if you wish to change any pre-existing options or settings.

Failure to do so will delete all bookkeeping functions and events for the current period.

Printer Set Up

Make sure the power is **OFF**.

- 1) Attach 3 pin "D" connector to P7 "D" connector ("D" connector in rear loads is laying on the bottom of the cabinet - - "D" connector in front load models is located on the control board cover).
- 2) Attach printer power supply to the outlet (outlet for rear loads is located at the rear of the AC power & switch box - - outlet on front loads is on the control board cover). See diagram below for rear load models.
- 3) Attach power supply plug connector to the back of the printer.
- 4) Turn printer ON/OFF switch to ON (printer power switch is located on the right side of the printer).



Rear Load Models

Configuration Print

Make sure printer is connected and turned ON.

While power is ON, hold down the Resume switch for 10 seconds.

Release Resume switch when printing begins.

The printout will show how the Bill Breaker is configured.

Sample Configuration Report

CONFIGURATION RPT
F53C_2_5
MACHINE NUMBER = 1
CASSETTE #1=\$1
CASSETTE #2=\$5
BILL LOAD = \$3000
DISPENSER #1 ENABLED
COIN LOAD=\$1000
COIN VALUE=\$0.25
DISPENSER #2 DISABLED
PRINTER IS --- ENABLED
TRANSACTION DEFINITIONS
\$1 IS ENABLED
-# CAS1=00/\$1
-# CAS2=00/\$5
-# COIN1=04/0.25
\$5 IS ENABLED
-# CAS1=00/\$1
-# CAS2=00/\$5
-# COIN1=20/0.25
\$10 IS ENABLED
-# CAS1=05/\$1
-# CAS2=00/\$5
-# COIN1=20/0.25
\$20 IS ENABLED
-# CAS1=05/\$1
-# CAS2=02/\$5
-# COIN1=20/0.25
\$50 IS DISABLED
\$100 IS DISABLED

Help Code Chart

HELP CODE	DESCRIPTION/ CORRECTIVE ACTION
?Out of Currency?	Reload cassette or magazine with currency and reconcile unit, answer "Y" to clear Recon data prompt; Be sure bill load amount is greater than or equal to amount of bills in the cassette or magazine, press Resume switch.
?No top cassette?	Replace Top Cassette, press resume switch
?No 2 nd cassette?	Replace Bottom Cassette, press resume switch
Dispenser Error Code - 1800	Remove top cassette, remove jammed bill, replace cassette, press resume switch, check for worn pick rollers.
Dispenser Error Code - 2800	Remove bottom cassette, remove jammed bill, replace cassette, press resume switch, check for worn pick rollers.
Dispenser Error Code – 78xx	Remove Bill Jam In Dispenser, press resume switch
In \$20 Pay \$10.00 Dispenser Error Code – 7A03	Bill Jam at BPS Sensor (NOTE: Check to be sure there is no interference between the dispenser bill exit area and the bill chute mounted to the cabinet). Remove jam and press resume. Clean sensors and belts, see page 33.
Dispenser Error Code – 89xx	Thickness Sensor Error, contact technician to realign thickness sensor,
?Wrong Cassette?	Magnet configuration on cassette is wrong – see pg. 24
Bill Acceptor Error	Validator isn't communicating with the host, check validation harness connections, press resume switch. If red LED on rear of acceptor is glowing ON and LED around outside bezel is flashing, the acceptor is operating normally. If rear LED is flashing, an error condition exists.
"BILL ACCEPTOR ERROR"	When a bill jams inside the validator, the transaction is aborted, and the message "Bill Acceptor Error" is displayed. The jam will have to be cleared before the Bill Breaker can be put back into operation. To recover from this condition: <ol style="list-style-type: none"> 1. Open the Bill Breaker door. 2. Recover jammed bill from the validator head or the stacker. 3. Press the resume switch to return to run mode. 4. Close Bill Breaker door.
"NO STACKER ATTACHED"	The Bill Breaker senses that the stacker is loose or missing. The display will read, "No stacker attached". To recover from this condition: <ol style="list-style-type: none"> 1. Open Bill Breaker door. 2. Disconnect and reconnect the stacker to the validator head assembly. 3. Press the resume switch to return to run mode. 4. Close the Bill Breaker door.

Stacker is Full	Stacker has reached its capacity. Empty stacker and reconcile unit
? Bill Jam?	Remove jammed bill from dispenser; press Resume.
In \$20 Pay \$10 Error Code 7A02	Bill jam occurred between DFSS and BPS sensor. Remove jammed bill and press Resume. Clean sensors and belts, see page 33.
? No Command Finish ?	Turn power off. Remove EPROM from its socket on main control PCB and put back in socket.
Blank Display	<ol style="list-style-type: none">1. If unit has second display and the second display is working, (a) check for damaged display, (b) check for loose harness, (c) swap displays.2. If only the bill acceptor activates (bill dispenser does not cycle as normal) when the unit is turned off and on, check voltages on main control PCB at TP1 & TP2. See Page 30.3. If no power at TP1 & TP2, replace fuse on power supply. See Page 30.

Help Code Chart

HELP CODE	CORRECTIVE ACTION
"BILL JAM"	<p>If an error occurs, the display will show a difference between the dollar value requested and the dollar value dispensed, along with an error message "Bill Jam." For example IN \$20 PAID \$10. To recover from this condition:</p> <ol style="list-style-type: none"> 1. Open Bill Breaker door. 2. Inspect for currency jam in the Cash dispensers cassettes, or the transport unit. Note: The highest probability is that the jam occurred in the currency cassette. Remove all currency from the cassette and reload it. 3. If no jammed bills are found, press Resume. The display will read "? Do reconciliation?" 4. Respond with "N". Display will read "? Cont dispense Y/N?" 5. IMPORTANT! Respond with "Y" and BE PREPARED TO CATCH the remainder of the currency from the dispenser because the door will be open in the front load models.
"?COIN EMPTY OR JAM?" "IN \$1.00 PAY 0.50"	<p>If an error occurs, the display will show a difference between the dollar value requested and the dollar value dispensed, along with an error message "?Coin empty or jam?" For example IN \$1.00 PAY \$0.50. To recover from this condition:</p> <ol style="list-style-type: none"> 1) Open Bill Breaker door. 2) Coin hoppers may be low on coins and need refilling. 3) Be sure coin hopper connector is secured in socket on lower rear corner of hopper. 4) If using 2 hoppers, hoppers can swap positions to determine if a problem follows the hopper. 5) Inspect for coin jam in the coin hoppers. Note: The highest probability is that the jam occurred in the coin hopper. Remove all coin from the hopper using coin purge cycle. If 2 hoppers are used, rotate them checking to see if problem follows the hopper. 6) Press Resume. The display will read "? Do reconciliation?" 7) Respond with "Y". Display will read "Purge coin, press Resume & follow prompts" 8) IMPORTANT! Respond with "Y" and BE PREPARED TO CATCH the remainder of the coin from the hoppers.

Status Report

Every time you press the Status switch, data will appear. Vital information such as starting amount of currency, amount of currency left, and the dollar amount in the stacker will be shown on the display. You can also print out all of this data for your records, if you have a printer.

Hit Resume switch.

Choose Y or N on printing report, hit Resume switch, and the Bill Breaker will return to normal, "Ready to Accept Bill".

External Status Report Key and Switch (for rear load models only)

On the rear load models, this key switch is located on the rear door next to the display. Insert the key into the switch. Rotating the key to the right will begin the display of vital information such as starting amount of currency/coin, amount of currency/coin left.

Rotating the key to the left will return to "Ready to Accept Bills".

Voltage Test Points

The following test points with their voltage settings are found on the main control board shown in Figure 4.

<u>Test Point</u>	<u>Action</u>	<u>Voltage Expected</u>
Jumper to TP 1 & 9 th pin on the 40 pin processor	Occasionally when the unit has been turned off for long periods of time, it is necessary to reset the processor. The action of the unit will be that the bill acceptor and dispenser can be heard activating but the display is blank. This action puts +5 VDC to the processor for the reset.	+5 VDC
TP1	Power to the processor	+5 VDC
TP 2	Power to the processor	+5 VDC
TP 3	Power for RS 232 for dispenser and PC interface	+ 9 VDC to +12 VDC
TP 4	Power for RS 232 for dispenser and PC interface	- 9 VDC to - 12 VDC
TP 5	Ground	Ground

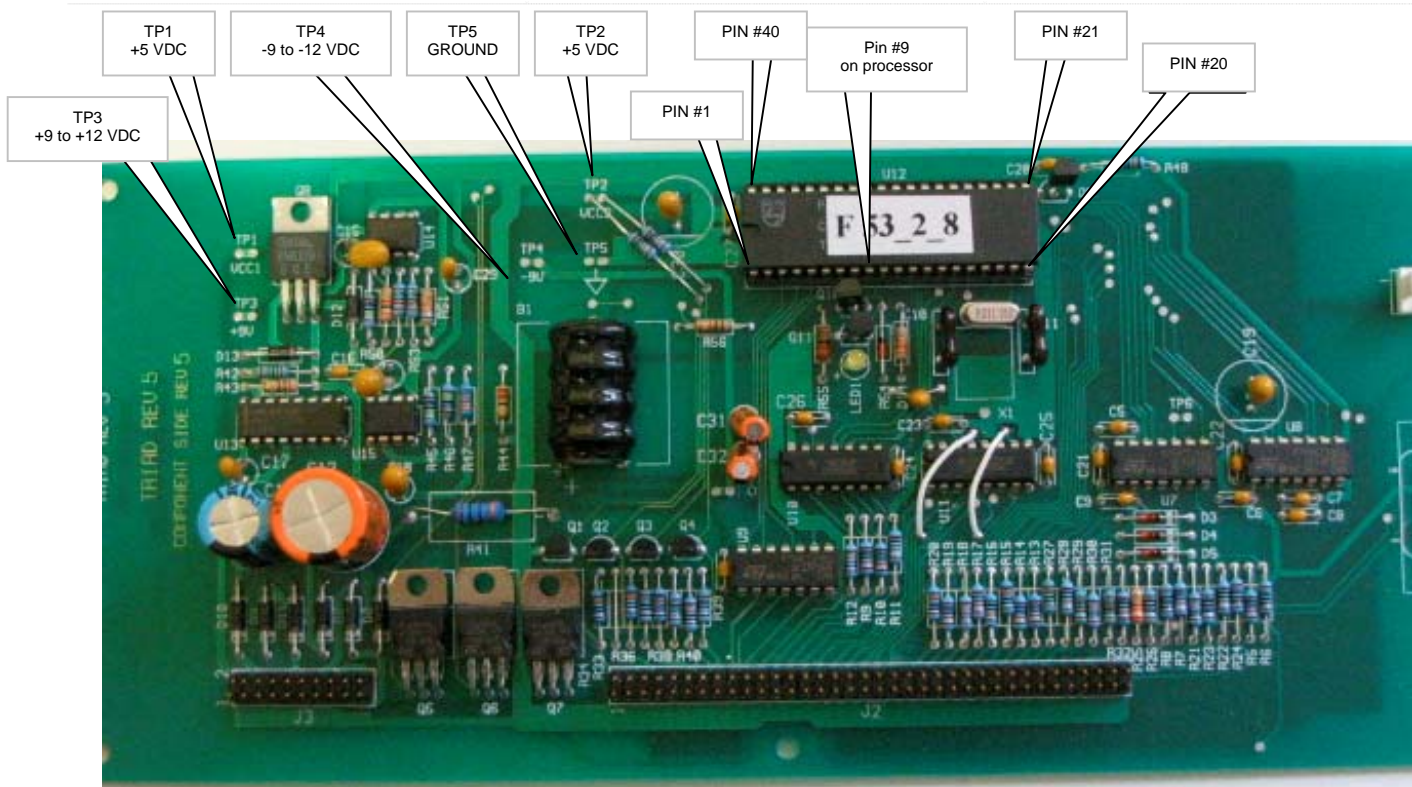


Figure 4

F-50 MAINTENANCE AND INSPECTION SCHEDULE

	Adjustment and Lubrication Item	Inspection Description	Inspection period			
			Four Months	Eight Months	One Year	Others
1	Thickness sensor inspection	Confirm the value of the amplifier board output.			O	
2	Belt tension inspection	Inspect the belt tension.			O	
3	Sensor output check	Check the outputs of the sensors, and clean the dirty sensors if any.	O			
4	Pick roller	Change pick roller			O	

F-53 MAINTENANCE AND INSPECTION SCHEDULE

Adjustment, Cleaning and Lubrication Item	Inspection Description	Inspection period			
		Four Months	Eight Months	One Year	Others
Thickness Sensor Inspection	Confirm the value of the amplifier board output			O	
Detection Lever Inspection	Check whether paper dust is attached to the thickness detection	O			
Gate Inspection	Check whether the gate operates smoothly			O	
Belt Tension Inspection	Inspect the belt tension			O	
Sensor Output Check	Check the outputs of the sensors, and clean the dirty sensors if any.	O			
Carrying Flat Belt Check	Check whether the flat belt is loose due to its expansion.			O	
Pick/Sub Roller	Change pick/sub roller			O	
Cleaning Sensors	Clean with soft dry cloth	O			
Cleaning Belts	Clean with soft dry cloth and Isopropyl Alcohol	O			
Cleaning Pick and Sub Roller	Clean with soft dry cloth and Isopropyl Alcohol	O			

Mars Bill Acceptor

The model AE 2611-U5E is used to accept \$1, \$2, \$5, \$10 & \$20 United States bills. The optional model AE 2811-U5E is used to accept \$1, \$2, \$5, \$10, \$20, \$50 & \$100 United States bills.

New Bill Design Updates

To update Bill Breaker to handle new bill designs, new software is downloaded into the bill acceptor. Contact a local MEI distributor to purchase a BPM (Bill Programming Module) or have the MEI distributor download new software into the bill acceptor. This is a simple procedure that most operators can do themselves. There is a nominal charge for the BPM and downloading service.

DIP Switch Settings

1-8 off..... normal operation accepting bills in 4 directions

1, 2 - 8 off.....accept bills in 1 direction

1-2 off, 3 on, 4 – 8 off.....high security feature off

Cleaning

It is time to clean the bill acceptor when bills are being returned to patrons at an unacceptable rate. Turn Bill Breaker power off. Lift chrome plated rod at the rear of the bill acceptor pulling the bill track out toward you. See Figure 1. Using a clean cloth dampened with IPA (isopropyl alcohol) wipe the bill track and white feed rollers removing dirt and ink. Also wipe clean the prism at the bottom of the bill box. Replace the bill track and bill box. Turn Bill Breaker power on.

For More Information

Contact the www.meiglobal.com for more detailed service and maintenance information.

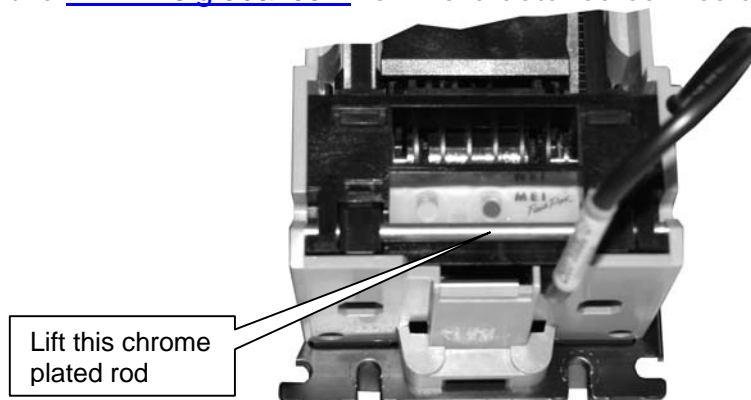


Figure 1

Coin Hoppers

The MK IV Universal Hoppers are used to dispense coins and tokens. The standard hopper set up will reliably dispense United States nickel to dollar sized coins and tokens.

United States dimes (10¢) and dime sized tokens

A specially designed elevator track is needed to handle the United States dime and tokens smaller than a dime. Contact Rowe International for more information.

Optional Hopper Extensions

Optional hopper extensions are available that hold an additional 400 quarters (\$100).

Cleaning

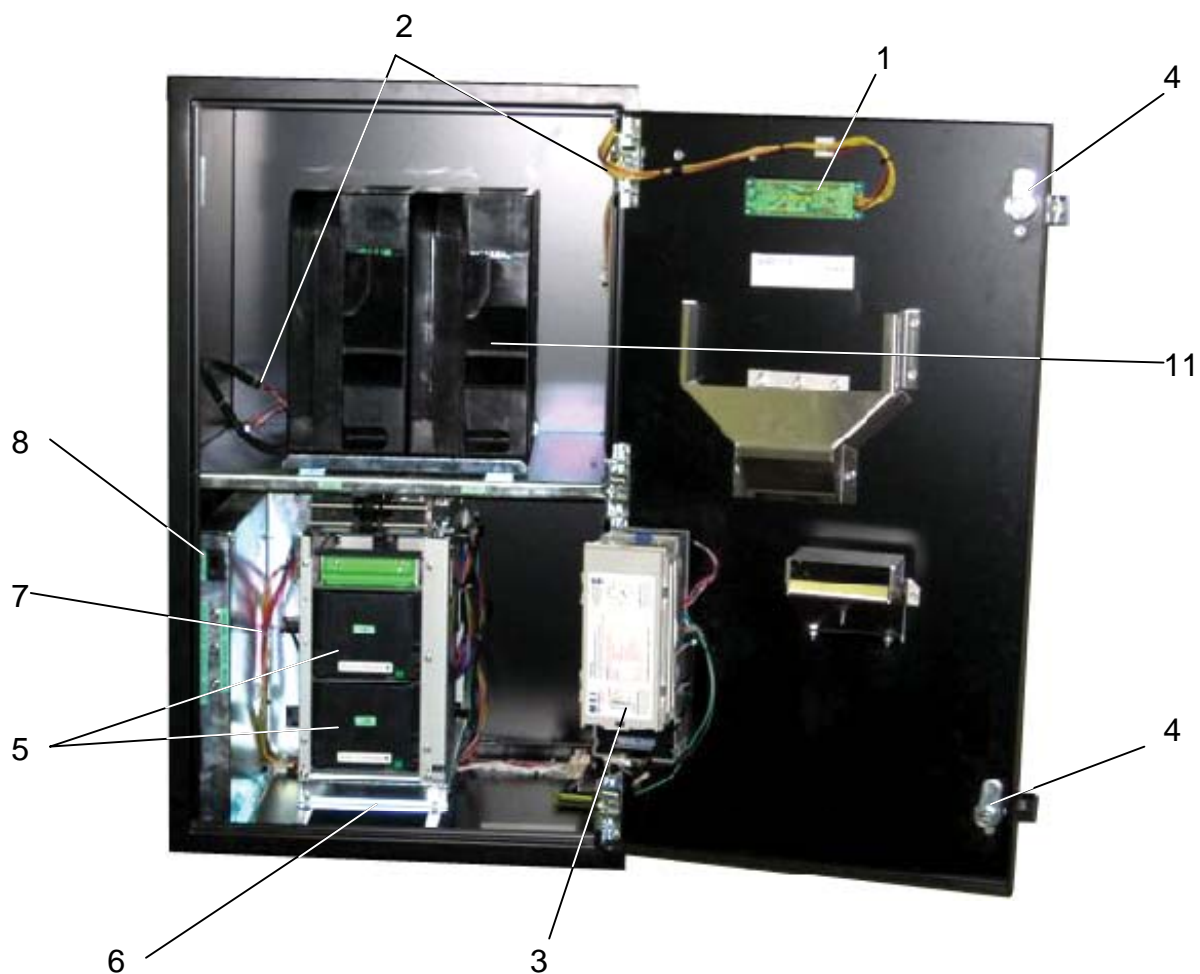
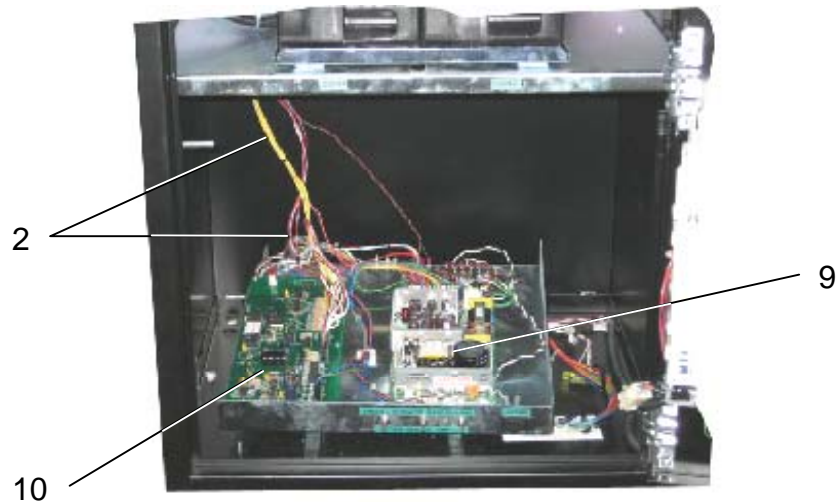
Periodically remove hopper by sliding hopper out of the slide plate and socket. Turn the hopper upside down shaking out the dirt. Canned air can also be used. Using a clean cloth dampened with IPA (isopropyl alcohol) wipe the debris inside of the hopper. Focus the canned air and wiping action toward the count sensor located above the coin exit area. Also use a "scrubby" type pad to wipe away accumulated dirt on the low level sensor plates at the bottom of the hopper.

For More Information

Contact the www.moneycontrols.com for more detailed service and maintenance information.

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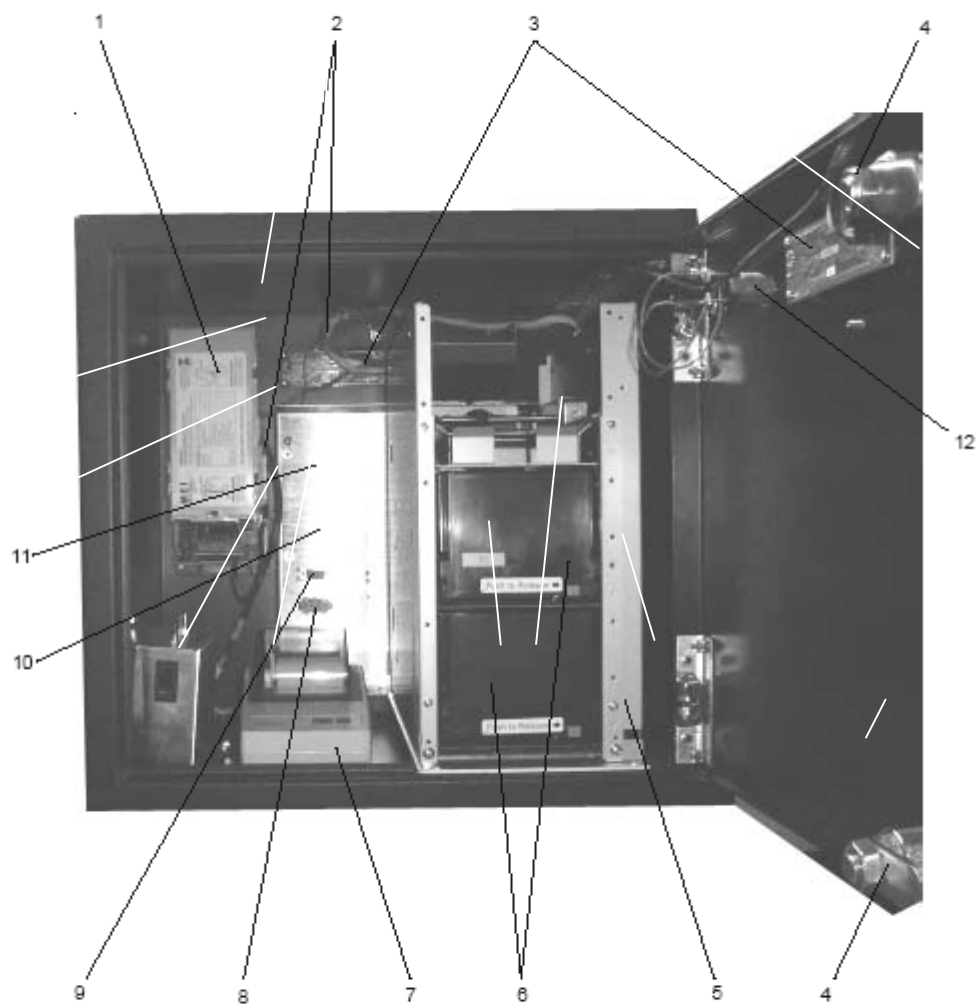
500C2-2 Front Load Bill Breaker



500C2-2 Front Load Bill Breaker (with 2 denomination bill dispenser and 2 coin hoppers)

Ref.	Part No.	Description	Qty
		Cabinet Assembly Internal View	Ref.
1	22196101	Display	1
2	22196201	Main Harness	1
3	22135607	Mars 2611 Bill Acceptor \$1, 2, 5, 10, 20 with 500 Bill Box	1
	22135608	Mars 2811 Bill Acceptor \$1, 2, 5, 10, 20, 50, 100 with 500 Bill Box (optional)	1
4	35027809	T-Handle Assembly with Hardware	2
	25223407	Lock Cylinder with 2 Keys	2
5	22197301	Cassette - No Lock	2
	22197401	Cassette - with Lock (optional)	2
	22197501	Cassette Lock (optional)	2
6	22197201	Fujitsu F53 Dispenser for 500-2	1
7	22196801	DB9 Dispenser Harness	1
8	22196701	8 Pin Dispenser Power Harness	1
9	22196301	Power Supply	1
10	22196001	Logic Printed Circuit Board	1
11	22203301	Coin Hoppers	1 or 2
	NOT SHOWN		
	22199701	Power Cord	1

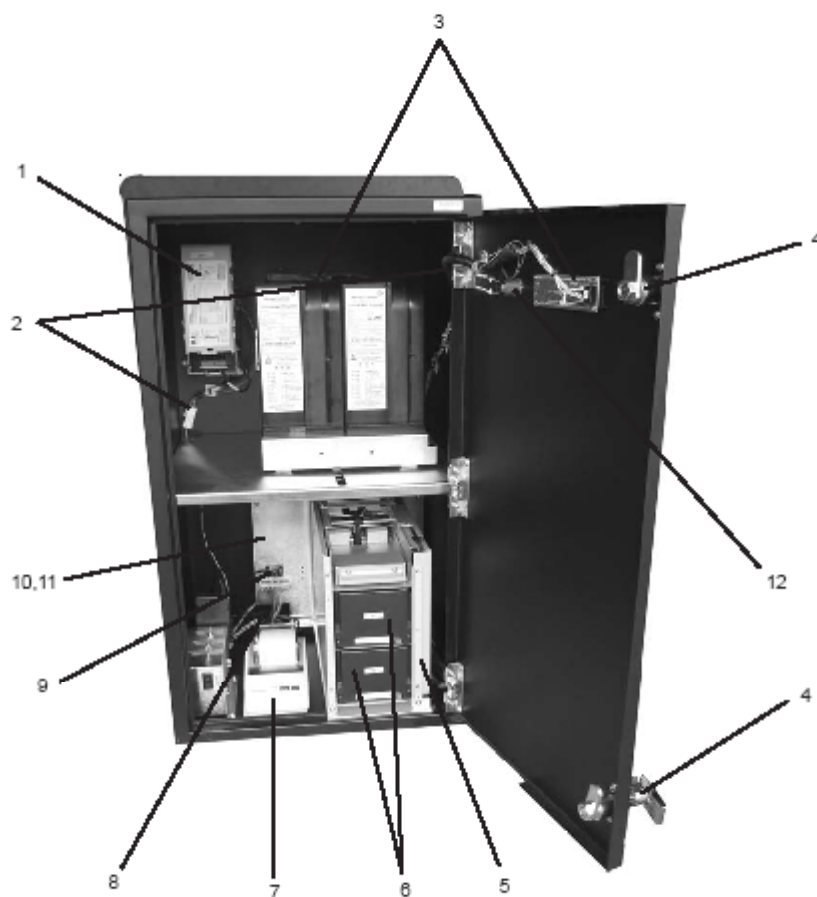
500RL-2 Rear Load Bill Breaker



500RL-2 Rear Load Bill Breaker (with 2 denomination bill dispenser)

Ref.	Part No.	Description	Qty
		Cabinet Assembly Internal View	Ref.
1	22135607	Mars 2611 Bill Acceptor \$1, 2, 5, 10, 20 with 500 Bill Box	1
	22135608	Mars 2811 Bill Acceptor \$1, 2, 5, 10, 20, 50, 100 with 500 Bill Box (optional)	1
2	22196202	Main Harness	1
3	22196101	Display	2
4	35027809	T-Handle Assembly with Hardware	2
	25223407	Lock Cylinder with 2 Keys	2
5	22203501	Fujitsu F53 Dispenser for 500RL-2	1
6	22197301	Cassette - No Lock	2
	22197401	Cassette - with Lock (optional)	2
	22197501	Cassette Lock (optional)	2
7	22199201	Citizen Printer (optional)	1
8	22196701	8 Pin Dispenser Power Harness	1
9	22196801	DB9 Dispenser Harness	1
10	22196001	Logic Printed Circuit Board	1
11	22196301	Power Supply	1
12	22206001	Attendant Access Switch with 2 keys	1
NOT SHOWN			
	22199701	Power Cord	1

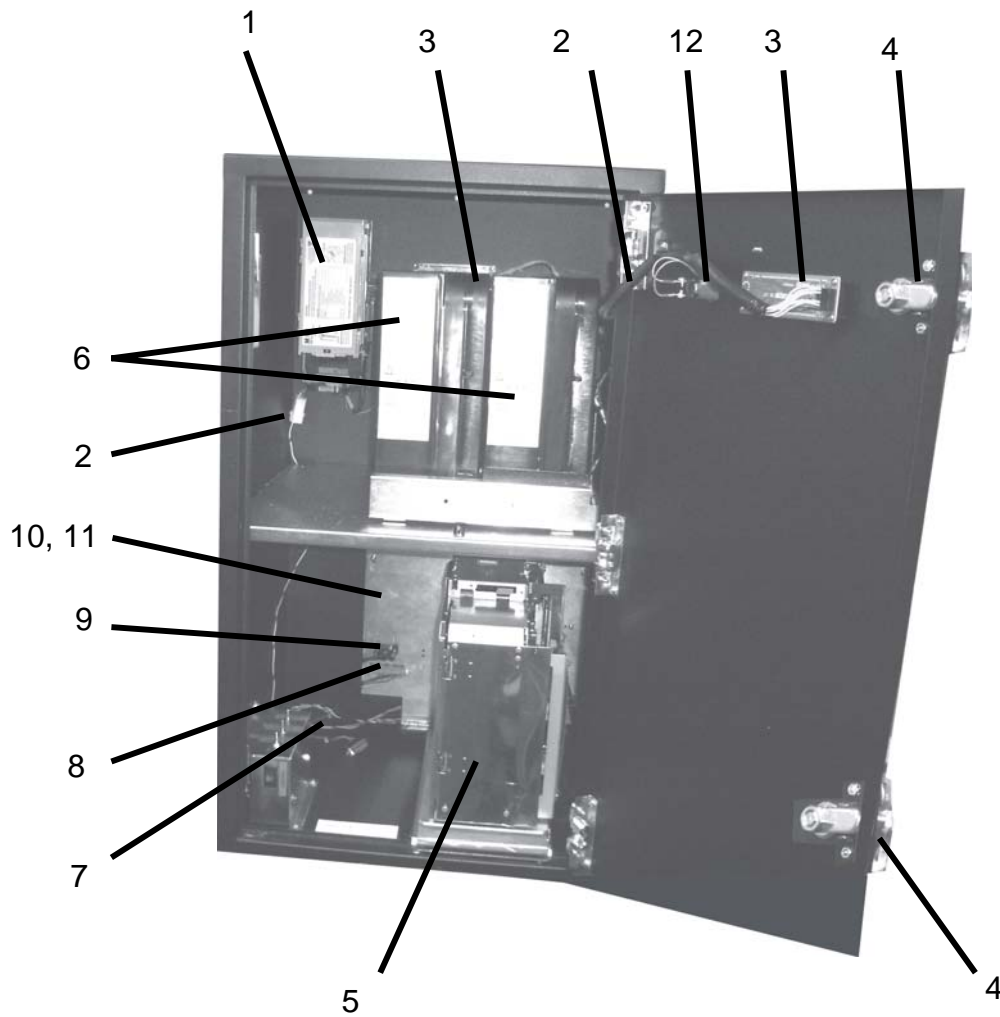
500RLC2-2 Rear Load Bill Breaker



500RLC2-2 Rear Load Bill Breaker (with 2 coin hoppers & 2 denomination bill dispenser)

Ref.	Part No.	Description	Qty
		Cabinet Assembly Internal View	Ref.
1	22135607	Mars 2611 Bill Acceptor \$1, 2, 5, 10, 20 with 500 Bill Box	1
Optional	22135608	Mars 2811 Bill Acceptor \$1, 2, 5, 10, 20, 50, 100 with 500 Bill Box	1
2	22196202	Main Harness	1
3	22196101	Display	2
4	35027809	T-Handle Assembly with Hardware	2
	25223407	Lock Cylinder with 2 Keys	2
5	22203501	Fujitsu F53 Dispenser for 500RLC2-2	1
6	22197301	Cassette - No Lock	2
Optional	22197401	Cassette - with Lock	2
Optional	22197501	Cassette Lock	2
7	22199201	Citizen Printer (optional)	1
8	22196701	8 Pin Dispenser Power Harness	1
9	22196801	DB9 Dispenser Harness	1
10	22196001	Logic Printed Circuit Board	1
11	22196301	Power Supply	1
12	22206001	Attendant Access Switch with 2 keys	1
13	22203301	Coin Hopper(s)	
NOT SHOWN			
	22199701	Power Cord	1

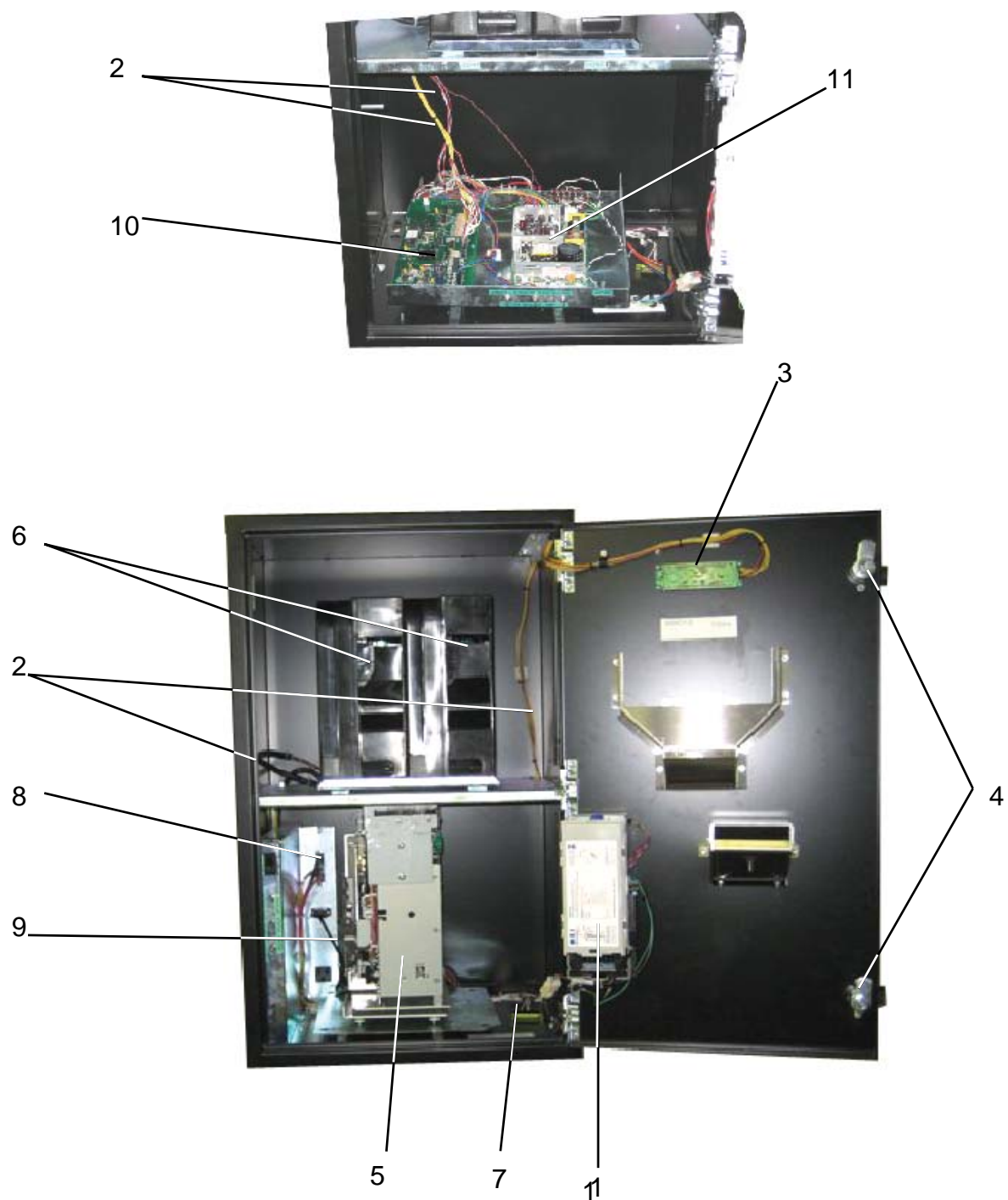
500RLC2-1 Rear Load Bill Breaker



500RLC2-1 Rear Load Bill Breaker (with 2 Coin Hoppers and 1 denomination bill dispenser)

Ref.	Part No.	Description	Qty
		Cabinet Assembly Internal View	Ref.
1	22135607	Mars 2611 Bill Acceptor \$1, 2, 5, 10, 20 with 500 Bill Box	1
Optional	22135608	Mars 2811 Bill Acceptor \$1, 2, 5, 10, 20, 50, 100 with 500 Bill Box	1
2	22196202	Main Harness	1
3	22196101	Display	2
4	35027809	T-Handle Assembly with Hardware	2
	25223407	Lock Cylinder with 2 Keys	2
5	22203601	Fujitsu F50 Dispenser for 500RLC2-1	1
6	22203301	Coin Hopper	2
7		Printer Harness is part of main harness #2 (Printer is Optional)	1
8	22218001	8 Pin Dispenser Power Harness	1
9	22196801	DB9 Dispenser Harness	1
10	61188701	Logic Printed Circuit Board	1
11	22196301	Power Supply	1
12	22206001	Attendant Access Switch with 2 keys	1
NOT SHOWN			
	22199701	Power Cord	1

500C2-1 Front Load Bill Breaker



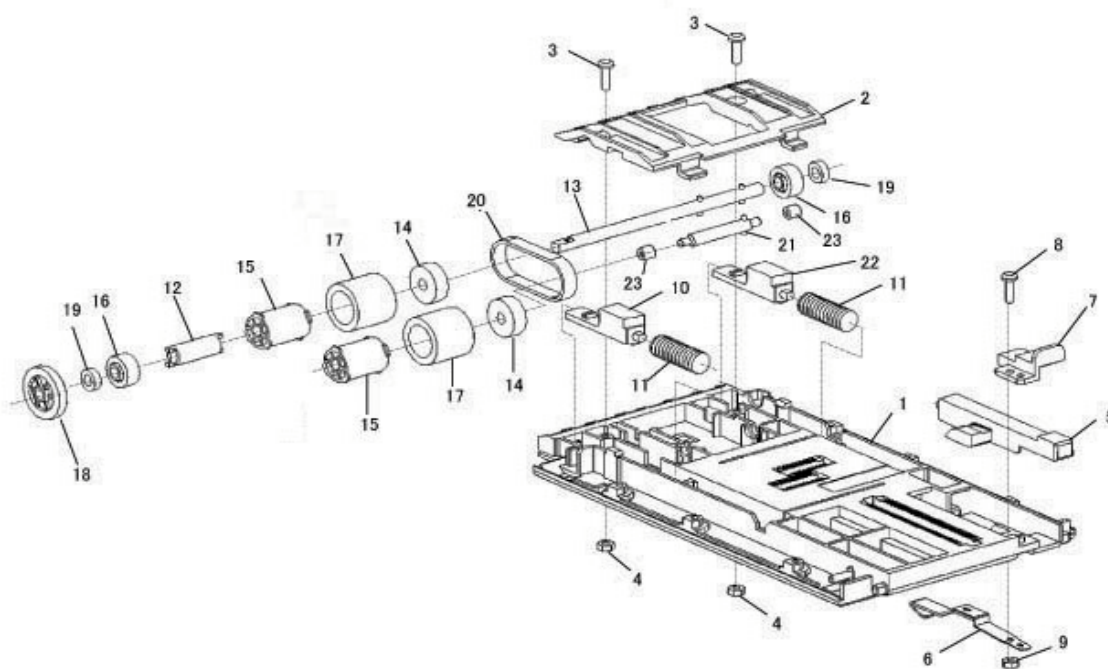
500C2-1 Front Load Bill Breaker (with 2 coin hoppers and 1 denomination bill dispenser)

Ref.	Part No.	Description	Qty
		Cabinet Assembly Internal View	Ref.
1	22135607	Mars 2611 Bill Acceptor \$1, 2, 5, 10, 20 with 500 Bill Box	1
Optional	22135608	Mars 2811 Bill Acceptor \$1, 2, 5, 10, 20, 50, 100 with 500 Bill Box	1
2	22196202	Main Harness	1
3	22196101	Display	2
4	35027809	T-Handle Assembly with Hardware	2
	25223407	Lock Cylinder with 2 Keys	2
5	22203601	Fujitsu F50 Dispenser	1
6	22203301	Coin Hoppers	2
7		Printer Harness is part of main harness #2 (Printer is Optional)	1
8	22218001	8 Pin Dispenser Power Harness	1
9	22196801	DB9 Dispenser Harness	1
10	61188701	Logic Printed Circuit Board	1
11	22196301	Power Supply	1
NOT SHOWN			
	22199701	Power Cord	1

Optional Printer



Ref.	Part No.	Description	Qty
1	22199801	Printer Interface Harness	1
2	22199901	Paper Roll 2.25" W x 2" Dia.	1
3	22199201	Citizen Dot-Impact Printer (optional) with User's Manual	1
4	22200101	Ribbon Cassette - Black	1
5	22196301	Power Supply (Input: 120 VAC, . 60 Hz, 20 W) (Output: DC 7.0 V, 1.6 A)	1



Item No.	Part Number	Description	Quantity
	22197301	Cash Cassette	1
1		Button Frame	1
2		Passway	1
3		Screw	2
4	22217101	Nut	2
5		Lock Lever	1
6		Lock Assembly	1
7		Lockfixer	1
8	22217401	Screw	1
9		Nut	1
10		Gear Lock	1
11		Spring	2
12	22194601	Spacer	1
13	22197701	Shaft Assembly	1
14	22197801	Pulley	2
15	22197901	Oneway Roller	2
16	22198001	Gear	2
17	22213501	Roller	2
18	22198201	Gear	1
19	22198301	Bearing	2
20	22198401	Timing Belt	1
21	22198501	Shaft Assembly	1
22		Gear Lock	1
23		Collar	2